

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION FOR LETTERS PATENT

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<p>EXPRESS MAIL</p> <p>Mailing Label Number <u>94915060699US</u></p> <p>Date of Deposit <u>10/15/03</u></p> <p>I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" Service under 37 CFR 1.10 on the date indicated above and is addressed to Mail Stop Patent Application, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450</p> <p><u>Nicholas Doukas</u></p> <p>(Typed or printed name of person mailing paper or fee)</p> <p><u>[Signature]</u></p> <p>(Signature of person mailing paper or fee)</p>	<p>Brian G. Gilpin Reg. No. 39,997 Nicholas D. Doukas Reg. No. 52,460 GODFREY & KAHN, S.C. 780 North Water Street Milwaukee, Wisconsin 53202 (414) 273-3500</p>
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ANIMAL CALL AND METHOD OF USE

BACKGROUND OF THE INVENTION

The present invention relates generally to animal calls which are used to attract animals. Specifically, this invention relates to an animal call that can be used to create different types of animal noises.

Calling devices have been used for a great many years to attract animals for a variety of purposes. Birdwatchers have used calls to attract fowl for viewing pleasure. Scientists have used calls to attract animals for study. Hunters have used calls to attract game animals to increase the chances of a successful hunt. Regardless of the purpose, animals calls are an important piece of equipment for those who desire to interact with animals.

A wide variety of animal calls are commercially available and known in the prior art ranging from a real deer antler to electronic recording and playback devices. One common type of animal call utilizes a reed placed within a longitudinal passage and in close proximity to a sound plate. The operator of the call forces air through the passage and across the reed. The forced air causes the reed to vibrate against the sound plate, thereby producing a sound.

A large number of calls have been developed based on the use of a reed. Specifically, many calls have been developed to produce more than one sound. For example, it is known that the size, shape, and composition of the passage, sound plate, and/or reed drastically effects the sound produced by a reed call. Based on this knowledge, one type of reed call disclosed in United States Patent Number. 4,950,201 to Sceery requires changing the passage, sound plate, and/or the reed in order to alter the sound generated by a reed based animal call. As such, the call must be disassembled and pieces interchanged in order to produce a different sound. The disassemble and interchange process, while effective for creating varied animal sounds, is

impractical for most call users. Individuals in pursuit of wild animals generally do not have the time or facilities required to disassemble and interchange animal call parts as required to produce different animal sounds.

Another type of reed call relies upon dials and buttons to alter the sound produced.

5 United States Patent Number 6,053,794 to Weiser discloses an elongated call with a selectively positionable reed. An operator rotates a dial on the call thereby changing the position of the reed within the call and thus altering the sound produced by the call. In addition, United States Patent Number 6,106,357 to Weiser discloses using an adjustable pin or button inserted into the passage to change the position of the reed within an animal call. These reed calls require the operator to
10 manually operate the calls much like a musician plays an instrument. While such calls may produce varied sounds, mastering the use of these calls requires a great deal of practice. Further, these calls use additional parts such as dials and buttons creates problems such as increased cost of manufacture, increased potential for breakage or malfunction, and an overall larger device.

Accordingly, a need exists for an animal call that solves these and other deficiencies in
15 the prior art. Of course, the present invention may be used in a multitude of situations where similar performance capabilities are required.

SUMMARY OF THE INVENTION

The present invention provides an animal call that is cost-effective to manufacture, provides improved functionality, produces different types of animal noises, and which solves
20 certain of the problems raised or not solved by existing designs.

The present invention provides for an animal call having a first sound generator and a second sound generator. The second sound generator is connected to the first sound generator. In one embodiment, the second sound generator is removably engaged to the first sound

generator. In one embodiment, the first sound generator and/or the second sound generator are manually actuated. For example, the first sound generator and/or the second sound generator may rely on air flow to create noise. The first sound generator and/or the second sound generator may have a reed positioned therein such that manual actuation causes the reed to vibrate, thus
5 producing a noise. In one embodiment, the first sound generator is actuated by turning the animal call over and back and the second sound generator is actuated by sucking on the second sound generator.

In one embodiment, the first sound generator has a sound insert positioned therein. The sound insert has a sound chamber with an air baffle positioned inside the sound chamber.

10 Turning the animal call over and back causes the air baffle to move in the sound chamber and produce a noise.

In one embodiment, the second sound generator (which can stand alone as an animal call) has a mouthpiece, a sound plate, and a reed. The sound plate is connected to the mouthpiece and the reed is functionally engaged to the mouthpiece. Sucking on the mouthpiece causes the reed
15 to vibrate against the sound plate and produce a noise. Alternatively, the second sound generator may be configured such that blowing on the mouthpiece causes the reed to vibrate against the sound plate and produce a noise.

While one possible application of the present invention is in connection with hunting and attracting animals, many other applications are possible and references to use in connection with
20 animals or animal noises should not be deemed to limit the uses of the present invention. The terms “reed,” “sound plate,” “body,” “sound insert,” “air baffle,” “air channel,” “air passage,” “sound cavity,” “holes,” or “opening” as used herein should not be interpreted as being limited to specific forms, shapes, numbers or compositions of a reed, sound plate, body, sound insert, air

baffle, air channel, air passage, sound cavity, holes, or openings. Rather, the reed, sound plate, body, sound insert, air baffle, air channel, air passage, sound cavity, holes and opening may have a wide variety of shapes and forms, may vary in number, and may be composed of a wide variety of materials. These and other objects and advantages of the present invention will become
5 apparent from the detailed description, claims, and accompanying drawings.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of an animal call in accordance with one embodiment of the present invention, with a sound insert moveable as indicated by arrow A shown in phantom;

FIG. 2 is a top view of the animal call of FIG. 1;

10 FIG. 3 is a bottom view of the animal call of FIG. 1;

FIG. 4 is a front view of the animal call of FIG. 1;

FIG. 5 is a left side view of the animal call of FIG. 1, the right side a mirror image thereof;

FIG. 6 is exploded view of the animal call of FIG. 1;

15 FIG. 7 is a cross-sectional view of the animal call of FIG. 1. taken along the plane 7-7 in FIG. 1, with different positions of reeds and an air baffle shown in phantom, where the air baffle is moveable as indicated by arrow A when the animal call is rotated as indicated by arrow B;

FIG. 8 is a top view of an air baffle of an animal call in accordance with one embodiment of the present invention, with a sound cavity shown in phantom;

20 FIG. 9 is a bottom view of the air baffle of FIG. 8, with an air channel and air passage shown in phantom;

FIG. 10 is a partially exploded view of an animal call in accordance with one embodiment of the present invention; and,

FIG. 11 is a left side view of an animal call in accordance with one embodiment of the present invention, the right side a mirror image thereof, an air baffle of a first sound generator and portion of a second sound generator shown in phantom, where FIG. 11 illustrates actuation of the first sound generator.

5 DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Illustrative embodiments of an animal call (identified generally as 30) in accordance with the present invention are shown in FIGS. 1 through 11. While the invention may be susceptible to embodiment in different forms, there are shown in the drawings, and herein are described in detail, certain illustrative embodiments with the understanding that the present disclosure is to be
10 considered an exemplification of the principles of the invention, and is not intended to limit the invention to those embodiments illustrated and described herein. Additionally, features illustrated and described with respect to one embodiment could be used in connection with other embodiments.

The animal call 30 of the present invention is capable of generating animal sounds. As
15 shown in FIG. 1-5, one embodiment of the animal call 30 has a first sound generator 32 and a second sound generator 44. Actuation of the first sound generator 32 produces one animal sound, while actuation of the second sound generator 44 produces another animal sound. The animal call 30 may have multiple sound generators 44, with each sound generator 44 producing a different animal noise.

20 The exact configuration of the first sound generator 32 depends on the specific noise sought to be produced and thus may take a variety of shapes, forms, and types. Similarly, the first sound generator 32 may be formed from a variety of materials such as plastic, metal, wood, or the like. Generally, as shown in FIG 1, the first sound generator 32 has a top 34, a body 36,

and a bottom 38. A sound insert 54 is positioned inside the body 36. In one embodiment, the top 34, body 36, and bottom 38 are manufactured of a single piece of material formed around the sound insert 54. In another embodiment, the top 34, body 36, and bottom 38 are formed of different pieces. In another embodiment, the top 34 and the body 36 are formed of a single piece and the bottom is another piece. These pieces may be attached to one another by any technique, such as welding, adhesive, nails, stamp fitting, melting, or the like.

As shown in FIGS. 1, and 2, the top 34 of the first sound generator 32 has at least one hole 40. Preferably, the top 34 has a plurality of holes 40. These holes 40 allow air to move in and out of the body 36. These holes 40 also allow sound to more easily escape from the body 36 when the first sound generator 32 is actuated. Also, as shown in FIGS. 3, 6, and 7, the bottom 38 of the first sound generator 32 has at least one opening 42. In other embodiments, the bottom 38 may have a plurality of openings 42. The opening 42 allows air to travel through the body of the first sound generator 32. As will be discussed, manipulation of air flow into and out of the first sound generator 32 causes a noise to be produced. The number, shape and configuration of the holes 40 and the openings 42 may be varied depending on the type of noise desired to be produced by the first sound generator 32.

As shown in FIGS. 6 and 7, a sound insert 54 is positioned inside the body 36 of the first sound generator 32. The exact configuration, manufacture, and composition of the sound insert 54 will vary depending on the type of animal noise desired to be produced by the first sound generator 32. Generally, as shown in FIGS. 6 and 7, the sound insert 54 has a top plate 56, a body 64, and a bottom plate 58. The top plate 56, body, 64, and bottom plate 58 may be formed of a single piece, separate pieces, or any combination thereof. In one embodiment, the body 64 is

a bladder attached to the top plate 56 and the bottom plate 58. In still another embodiment, the top plate 56 is a plastic like coating. The top plate 56, body 64, and bottom plate 58 define a sound chamber 61. The top plate 56 and/or bottom plate 58 may have any number of holes or openings to allow air and sound to travel in and out of the sound chamber 61. For example, in one embodiment shown in FIG. 6, the top plate 56 has one hole 73 and the bottom plate 54 has one hole 74.

In one embodiment shown in FIGS. 1, 6 and 7, an air baffle 62 is positioned inside the sound chamber 61. As shown in FIG. 1 and 7 and indicated by arrow A, the air baffle 62 is able to move within the sound chamber 61. The exact configuration, shape, form, and composition of the air baffle varies depending on the sound desired to be produced by the first sound generator 32. In one embodiment, the top plate 56 is a coating applied to the air baffle 62. The top plate 56 need not contact or engage the body 64 to form the sound chamber 61. In this embodiment, the movement of the air baffle 62 results in expansion or contraction of the sound chamber 61. Regardless of the specific configuration of the air baffle, movement of the air baffle 62 inside the sound chamber 61 produces a noise. Specifically, movement of the air baffle 62 causes air to move through the air baffle 62, out the sound insert 54, and out the first sound generator 32. The configuration of the first sound generator 32 operates to restrict this air flow, thereby producing a noise when the first sound generator 32 is actuated.

In one embodiment shown in FIGS. 6 through 9, the air baffle 62 has an air channel 64, an air passage 66, a sound cavity 70, and a reed 72. The air channel 64 operates to direct air in a certain pattern and into the air passage 66. When the first sound generator 32 is actuated, air travels into the sound insert 54, through the air channel 64, into the air passage 66, out the sound

cavity 70, past the reed 72, and out the opening 74 in the bottom plate 58 of the sound insert 54.

The flow of air out of the sound cavity 70 and past the reed 72 causes the reed 72 to vibrate.

Vibration of the reed 72 produces a noise.

In one embodiment, the first sound generator 32 is manually actuated by the operator
5 expending physical effort. For example, in the embodiment shown in FIG. 7 and 11, the first
sound generator 32 is actuated by turning the animal call 30 over and back while partially closing
the opening 42 in the bottom of first sound generator 32. As shown in FIG. 11a and indicated by
arrow A, turning the animal call 30 over (or inverting the animal call 30), either fully or partially,
causes the air baffle 62 to travel to the top of the sound chamber 61 and air to fill the bottom of
10 the sound chamber 61. For example, turning the animal call 30 in the direction indicated by
arrow B in FIG. 7 causes the air baffle to move in the direction indicated by arrow A. As shown
in FIG. 11b and indicated by arrow A, turning the animal call 30 back to an upright position,
causes the air baffle 62 to travel to the bottom of the sound chamber 61. In FIG. 11, the position
of the air baffle is shown in phantom and its relative direction of travel is indicated by an arrow.
15 As the air baffle 62 travels in the sound chamber 61, air flows through the air channel 64, into the
air passage 66 out the sound cavity 70, over the reed 72, out the opening 74 in the bottom plate
68 of the sound insert 54, and out the opening 42 in the bottom 38 of the first sound generator 32.
This air flow is shown in broken arrows on FIG. 7. This air flow functions to vibrate the reed 72,
thus producing a noise. The noise produced by the first sound generator 32 may be manipulated
20 by controlling the size of the openings 74 or 42. In one embodiment, the operator of the animal
call 30 places a finger over the opening 42 thereby controlling the amount of air escaping from
the first sound generator 32 and thus altering the noise produced. In another embodiment, a

slide, dials, buttons, or other manipulation implements are incorporated into the first sound generator 32 to control the amount of air escaping the first sound generator 32.

As discussed, in one embodiment of the present invention, the animal call 30 has a second sound generator 44 positioned on the first sound generator 32. The second sound generator 44 may be a separate apparatus than the first sound generator 32. In this embodiment, the second sound generator 44 may be permanently fixed or may be removably engaged to the first sound generator 32. For example, FIGS. 12-16 show an animal call according to one embodiment of the present invention where the second sound generator 44 has been removed from the first sound generator 32. As shown in FIG. 6, the second sound generator 44 may be inserted into an aperture 45 in the body 36 of the first sound generator 32. Alternatively, the second sound generator 44 may be formed as part of the first sound generator 32.

The exact configuration of the second sound generator 44 depends on the specific noise sought to be produced and thus may take a variety of shape, forms, and types. Similarly, the second sound generator 44 may be formed from a variety of materials such as plastic, metal, wood, or the like. For example, in one embodiment shown in FIGS. 6, 7, and 10, the second sound generator 44 has a mouthpiece 46, a sound plate 48, and a reed 50. The sound plate 48 has a sound channel 52 therein. The mouthpiece 46 and sound plate 48 may be formed of a single piece of material or may be formed of separate pieces that fit together. This embodiment of the second sound generator 44 may function as a stand alone animal call 30. In other embodiments, the second sound generator 44 may have slides, buttons, or other air flow manipulation implements. Further, in other embodiments, the second sound generator 44 may be configured and/or constructed as disclosed in United States Patent No. 6,083,075 to Meeks, United States

Patent No. 4,950,201 to Sceercy, United States Patent No. 6,106,357 to Weiser, United States Patent No. 6,053,794 to Weiser or United States Patent No. 6,042,447 to Thompson, which are hereby incorporated by reference in their entireties for all purposes.

Depending on the design, the second sound generator 44 may be actuated in a number of ways. In one embodiment, the second sound generator 44 is manually actuated by the operator expending physical effort. In the embodiment shown in FIG. 6, the second sound generator 44 is actuated by sucking on the mouthpiece 46. Sucking on the mouthpiece 46 causes air to flow over the reed 50. In another embodiment, blowing on the mouthpiece 46 causes air to flow over the reed 50. This air flow makes the reed 50 vibrate against the sound channel 52 thus producing noise. In another embodiment, the second sound generator 44 is actuated by blowing on the mouthpiece 46. Further, in other embodiments, the sound produced by the second sound generator 44 may be altered by manipulating slides, buttons, or other implements on the second sound generator 44.

The animal call 30 of the present invention may have other applications aside from use in connection with hunting and attracting animals. Although the invention has been herein shown and described in what is perceived to be the most practical and preferred embodiments, it is to be understood that the invention is not intended to be limited to the specific embodiments set forth above. Rather, it is recognized that modifications may be made by one of skill in the art of the invention without departing from the spirit or intent of the invention and, therefore, the invention is to be taken as including all reasonable equivalents to the subject matter of the appended claims.